AMENDMENTS

Please cancel claims 38, 41, 42, 49, 75, 86, and 90-93; and add new claims 101-118 to the application as shown below:

101. A purified polypeptide comprising a SCHAG amino acid sequence, wherein the SCHAG amino acid sequence includes at least one substitution of an amino acid residue having a reactive amino acid side chain, and wherein the substituted amino acid is exposed to the environment in an ordered aggregate comprised of said polypeptides.

102. A purified polypeptide according to claim 101, wherein the SCHAG amino acid sequence comprises a member selected from the group consisting of SEQ ID NOs: 2, 4, 17, 19, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 46, 47, and 50 and prion aggregation domain fragments thereof.

103. A purified polypeptide according to claim 101, wherein the SCHAG amino acid sequence comprises the SUP35 amino acids 2 through 113 of SEQ ID NO: 2, or prion aggregation domain fragments thereof.

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104. A purified polypeptide according to claim 103, wherein the reactive amino acid is selected from the group consisting of cysteine, lysine, tyrosine, serine, glutamate, aspartate, asparagine, glutamine, and arginine.

105. A purified polypeptide according to claim 103, wherein the reactive amino acid is selected from the group consisting of cysteine, lysine, tyrosine, glutamate, aspartate, and arginine.

106. A purified polypeptide according to claim 103, wherein the reactive amino acid is cysteine.

107. A purified polypeptide according to claim106, wherein the polypeptide further includes an epitope tag.

108. A polypeptide according to claim 106, wherein the polypeptide further includes a polyhistidine tag.

109. A polypeptide according to claim 106, wherein the polypeptide further includes a substituent attached to the reactive amino acid side chain, the substituent selected from the group consisting of an enzyme, a metal atom, an affinity binding molecule having a specific affinity binding partner, a carbohydrate, a fluorescent dye, a chromatic dye, an antibody, a growth factor, a hormone, a cell adhesion molecule, a toxin, a detoxicant, a catalyst, a light-harvesting substitutent, and light altering substituent.

110. A polypeptide according to claim 106, wherein the substituent is a metal atom.

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111. A purified polynucleotide comprising a nucleotide sequence that encodes a polypeptide according to claim 101.

112. A vector comprising a polynucleotide according to claim 111.

113. A host cell transformed or transfected with a polynucleotide according to claim 111.

114. A host cell transformed or tranfected with a vector according to claim 112.

115. A purified polypeptide according to claim 81, wherein the at least two amino acids comprise different selectively reactable amino acid side chains.